

AUTOSTART 710 (AS710S) series

PROGRAMMABLE GENERATOR CONTROLLER



The Autostart 710 provides the control features needed for the automatic start, load transfer and shutdown of a standby generator or pump. Microprocessor technology allows the Autostart 710 to be programmed for use in a wide range of engine and generator control applications.

Key features

- Automatic or manual operation, selected by key-switch or optional rotary switch.
- 32 character, back-lit liquid crystal display (LCD), showing operating mode, system status, timer information, generator RPM/Hz., oil pressure and engine temperature
- Full programmability of engine control options, timers, trip levels, fault options and input/output configurations
- Comprehensive fault protection and alarm system:- low oil pressure and high engine temperature alarms (using analogue or switch sensors), engine overspeed and underspeed, emergency stop, start fail, charge fail, high and low battery voltage, 3 programmable fault inputs.
- 6 programmable outputs, each configurable to one of over 30 function types.
- Pin compatibility with Keystart 9700 range, allowing standardisation of panel wiring

Operation

The AS710's operating mode is selected by use of a 3 position switch:-

- Off/reset. Removes power from the unit, disabling the engine and resetting a latched fault condition.
-  Automatic start-up, load transfer and return to standby in response to a mains fail or remote start condition, with full fault protection.
-  Manual start and stop of the generator, either immediately on selecting manual mode or by use of remote push button switches.

Green and amber LEDs around the switch indicate the selection of Auto or Manual modes. On keyswitch versions, the key is common to all units and is removable in the Off and Auto positions only.

Control Outputs

The following outputs are provided:-

- Single pole, switched +ve relay outputs for the control of engine fuel and starter motor circuits.
- Switched +ve outputs for signalling auto and manual modes, plus a -ve DC output for Off/reset.
- 6 function programmable outputs (see overleaf).

Fault Protection and Alarm System

In Auto or Manual modes, Autostart shuts down and latches out the generator on detection of low oil pressure, high engine temperature, overspeed, start fail or emergency stop faults. The Autostart may also be set up to shut down the generator on a low generator frequency or speed condition.

3 additional inputs may be used with remote fault switches (giving a 'shutdown' or 'warning' response), or as control inputs with remote contacts or panel switches (see overleaf).

Non-latching, 'warning only' alarms are provided for high and low battery volts, charge fail and mag. pickup fail conditions.



Product Specification

Power supply:

Operating voltage: steady state range	5 – 40 V DC continuous,
crank brown-out	to 0 V for ≤ 100 mSec
Current consumption	typically 150 mA

Inputs:

DC inputs (inputs 1 - 5, mains fail):	
positive input voltage range	80% to 100% of battery +ve
negative input voltage range	-1V to +2V w.r.t. battery -ve
Generator AC input:	
operating voltage range	90 – 300 V AC rms
frequency measurement range	0 – 99 Hz.
Magnetic pickup:	
operating voltage range	7 – 80 V AC rms
frequency measurement range	0 – 10 kHz

Outputs:

(all ratings for resistive load)

Start and fuel relays	+ ve DC (switched SPNO contact) 16A max. @ 24 V DC
Programmable outputs 1 – 3	- ve DC (open collector transistor) 250mA max. @ 33 V DC
Programmable output 4	- ve DC (switched SPNO contact) 5A max. @ 24 V DC
Programmable output 5 (default setting: common alarm)	+ ve DC (switched SPNO contact) 5A max. @ 24 V DC
Programmable output 6 (default setting: gen. contactor)	volt free SPNO relay contacts 5A max. @ 240 V AC
Auto & Manual outputs	+ ve DC (switched), 250 mA max.
Off/reset output	- ve DC (switched), 250 mA max.

General:

Overall dimensions (W x H x D)	96 x 96 x 162 mm
Panel cut-out size	DIN standard 92 x 92 mm
Weight	approx. 650 g
Operating ambient temperature	-10 to +55 °C
Case sealing	IP22

In order to consistently bring you the highest quality, full featured products, we reserve the right to change our specifications and designs at any time.

Programmable functions

The Autostart 710 has over 30 programmable functions:-

Timers:-

Start delay; preheat, crank and crank cool (dwell) times; alarm override time; warm-up delay, mains restore delay; engine cool (run on, off load) time, speed signal delay.

Inputs:-

Inputs 1 and 2 are dedicated for use with low oil pressure and high engine temperature sensors, switch or analogue type. Inputs 3, 4 and 5 may be programmed for a range of uses, including shutdown or warning faults, manual restore (of mains), test off load, alarm mute, etc. The inputs can be set up to work with remote contacts which either open or close when active, with wiring to either +ve or -ve DC.

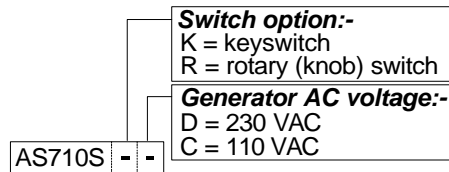
Outputs:-

6 programmable outputs, each of which may be set to give one of over 30 signalling or control 'actions', including: Preheat (4 types), Energised to Stop Fuel, Louvre Control, Generator Available, Common Alarm, Alarm (muteable), Shutdown Fault, Warning Fault, Overspeed, Start Fail, individual faults (1 - 5), etc.

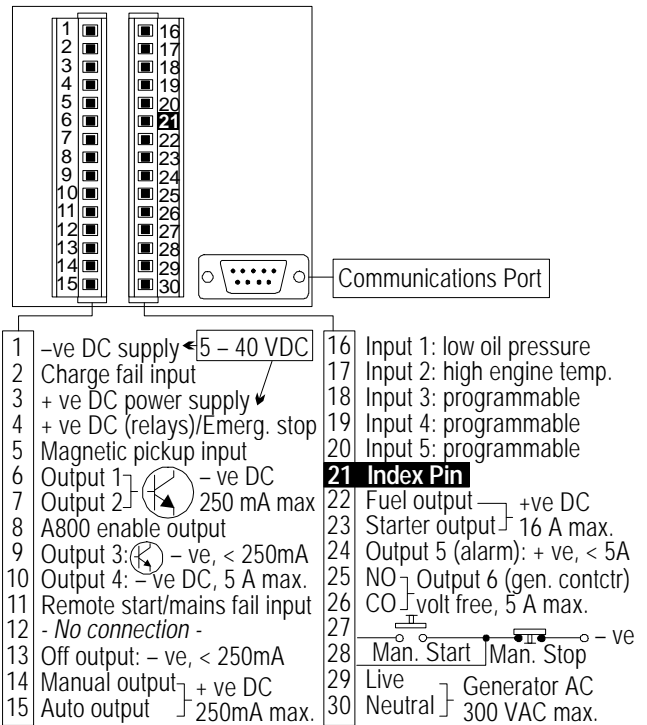
Other System parameters:-

Crank release (by engine RPM, generator Hz. or charge alternator WL voltage), underspeed and overspeed trip levels (Hz. or RPM); maximum number of start attempts; high and low battery voltage warning levels; enable or disable loading of generator in manual mode.

When ordering, please specify:-



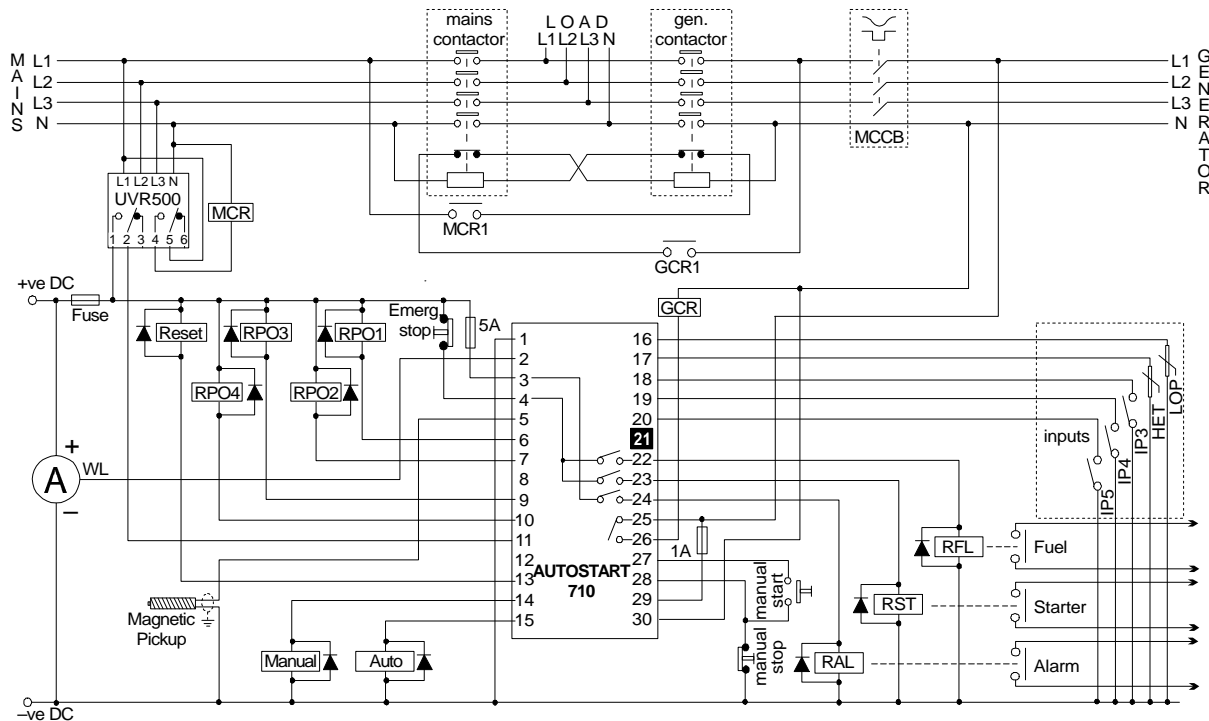
Rear Facia & Electrical Connection



Accessories:-

- AS7PROG** Hand held programmer key-pad
- AS7CA** 9 way (interface) to 9 way (PC) comms lead
- AS7CB** 9 way (interface) to 25 way (PC) comms lead
- AS7CC** RS232 communications local interface
- AS7CD** RS232 communications modem interface
- AS7CK** AS7xx communication and programming software

Typical Connection



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